TECHNICAL SERVICE BULLETIN
Clicking/Scraping Noise From Under The Vehicle When Moving With Heat Shield Detachment

21-2296
24 September 2021

Model:

Ford 2021 F-150

Issue: Some 2021 F-150 vehicles may exhibit a clicking/scraping noise from under the vehicle. This may be due to a heat shield becoming detached from the underside of the body and/or pickup bed. The heat shield from the underside of the pickup bed may also be partially detached or missing. To correct the condition, follow the Service Procedure to repair the heat shield(s).

Action: Follow the Service Procedure steps to correct the condition if the vehicle meets all of the following criteria:

- 2021 F-150
- At least one of the following conditions:
  - Clicking/scraping noise from under the vehicle
  - Heat shield detached from the underside of the body
  - Heat shield partially detached or missing from the underside of the pickup bed

NOTE: Part quantity refers to the number of that service part number required, which may be different than the number of individual pieces. Service part numbers contain 1 piece unless otherwise stated. "As Needed" indicates the part is required but the number may vary or is not a whole number; parts can be billed out as non-whole numbers, including less than 1.

Parts

Part Number	Description	Quantity
FL3Z-5290-C	Heat Shield	1 Per Affected Location
Obtain Locally	Alcohol Wipes Or Equivalent	As Needed

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/SPW/SSP/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

Labor Times

Description	Operation No.	Time
2021 F-150: Inspect Heat Shields, Replace The Under Bed Heat Shield Following The Service Procedure (Do Not Use With Any Other Labor Operation)	212296A	0.3 Hrs.
2021 F-150: Inspect Heat Shields, Repair The Under Body Heat Shield Following The Service Procedure (Do Not Use With Any Other Labor Operation)	212296B	0.4 Hrs.
2021 F-150: Inspect Heat Shields, Replace The Under Bed Heat Shield And Repair The Under Body Heat Shield Following The Service Procedure (Do Not Use With Any Other Labor Operation)	212296C	0.5 Hrs.

Repair/Claim Coding

Causal Part:	5290
Condition Code:	33

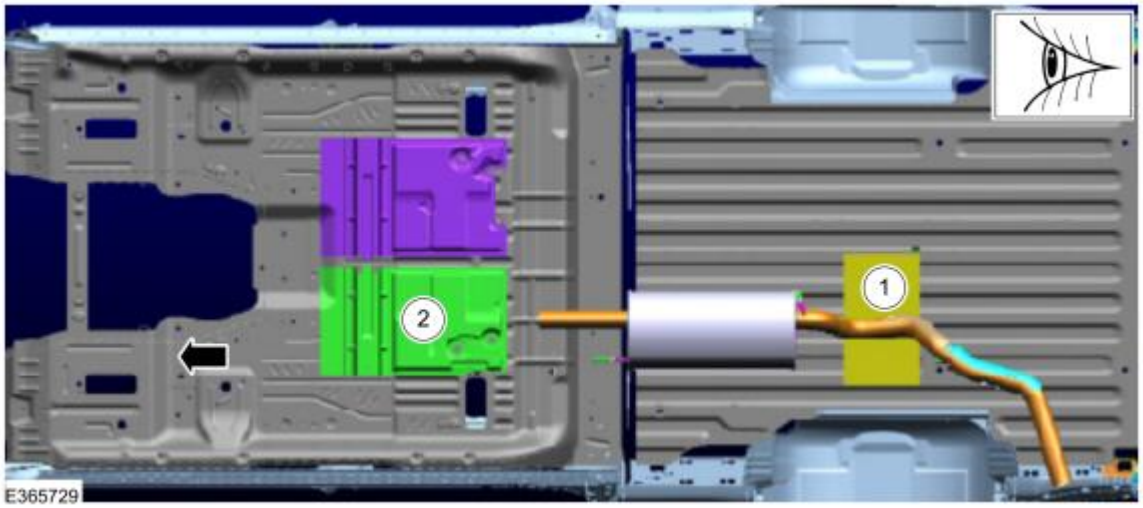
Service Procedure

NOTE: Allow the exhaust system to cool before beginning this Service Procedure.

1. Position the vehicle on a hoist. Refer to Workshop Manual (WSM), Section 100-02.

2. Inspect the underside of the vehicle for a detached and/or missing heat shield in the locations shown in Figure 1. The corners of the heat shields being inspected should be firmly secured. Is there a detached and/or missing heat shield from the underside of the pickup bed (Figure 1 Callout 1) and/or the underside of the body (Figure 1 Callout 2)?

Figure 1



Item	Description
1	Heat shield location 1, underside of the pickup bed
2	Heat shield location 2, underside of the body

(1). Yes - for a detached or missing heat shield from the underside of the pickup bed (Figure 1 Callout 1) or both locations in Figure 1, proceed to Step 3. For only a detached heat shield from the underside of the body (Figure 1 Callout 2), proceed to Step 4.

(2). No - this article does not apply. Refer to WSM, Section 100-04 for normal diagnostics.

3. Replace the heat shield on the underside of the pickup bed (Figure 1 Callout 1).

(1). If the heat shield under the pickup bed is still in place, but only detached, carefully remove the detached heat shield from the underside of the pickup bed.

(2). Use isopropyl alcohol and a lint-free rag or equivalent to clean the sheet metal bonding surface of any dirt and debris to promote adhesion. It is acceptable to have some residual adhesive from the old heat shield remain on the sheet metal surface.

NOTE: Make sure that the surfaces being cleaned are free of moisture, dirt, and that the isopropyl alcohol used in the cleaning process has had time to dry/evaporate before attempting to install the new heat shield.

(3). Remove the protective liner from the back of the replacement heat shield to expose the adhesive and install the replacement heat shield onto the underside of the pickup bed as indicated in Figure 1 Callout 1. Firmly push the heat shield against all the sheet metal surfaces the heat shield comes in contact with. This will make sure there is proper adhesion to the sheet metal surface.

(4). For vehicles with no detached and/or missing heat shield at the location shown in Figure 1 Callout 2, repair is complete. For vehicles with a detached and/or missing heat shield at the location shown in Figure 1 Callout 2, proceed to Step 4.

4. Is the vehicle equipped with a crossmember that supports a center bearing for a 2-piece driveshaft?

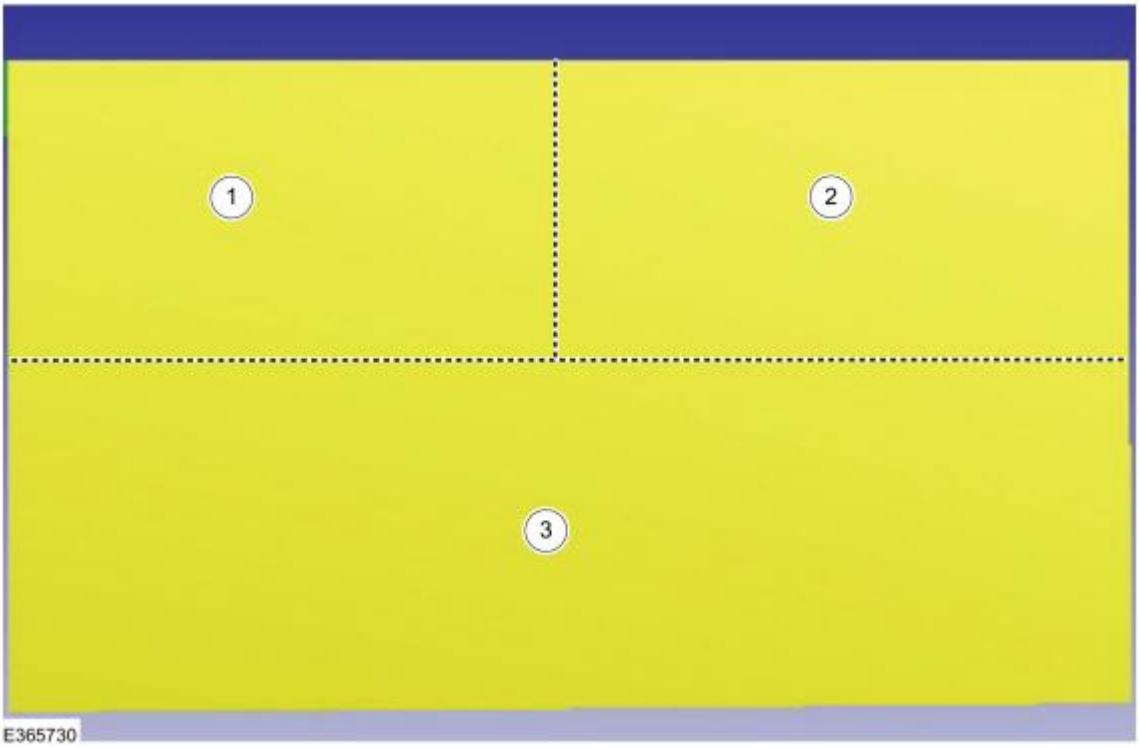
(1). Yes - proceed to Step 5.

(2). No - proceed to Step 6.

5. Repair the heat shield on the underside of the body for vehicles equipped with a crossmember that supports a center bearing for a 2-piece driveshaft using 2 repair patches (Figure 1 Callout 2).

(1). Create 2 small individual repair patch sections by cutting a heat shield as shown in Figure 2. The 2 smaller pieces are to be cut 150mm x 260mm.

Figure 2



Item	Description
1	150 mm x 260 mm
2	150 mm x 260 mm
3	150 mm x 520 mm

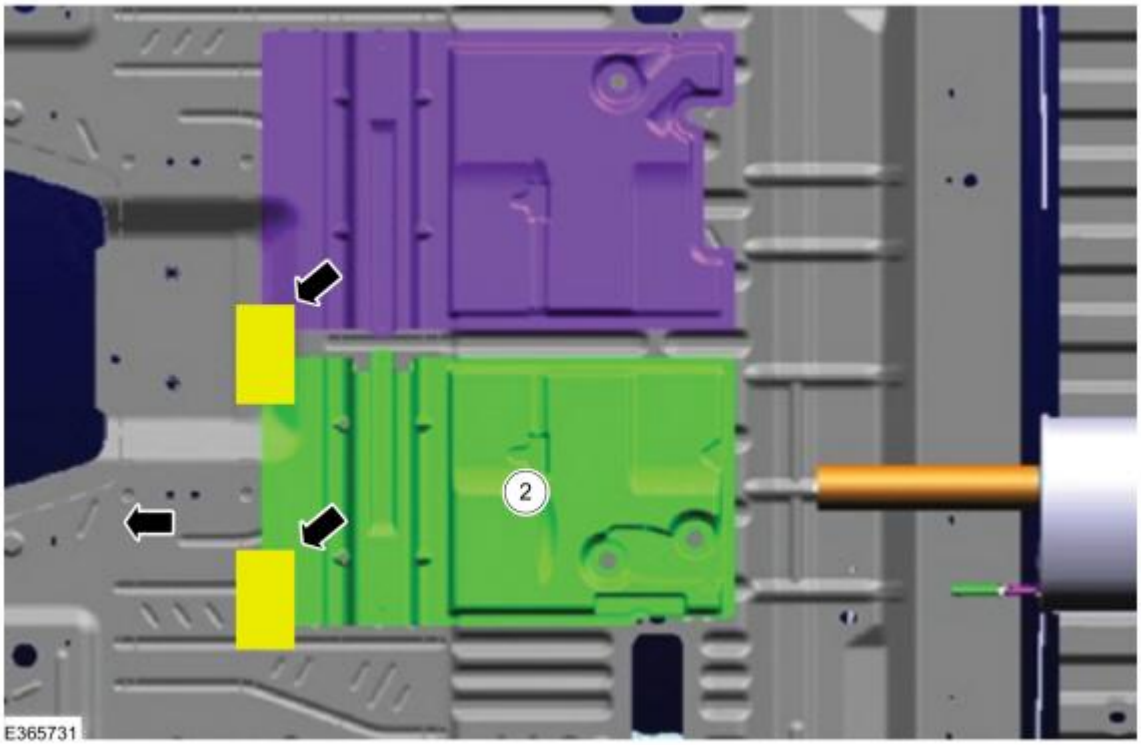
(2). Use isopropyl alcohol and a lint-free rag or equivalent to clean the sheet metal bonding surface and the surface of the factory installed heat shield of any dirt and debris to promote adhesion.

NOTE: Make sure that the surfaces being cleaned are free of moisture, dirt and that the isopropyl alcohol used in the cleaning process has had time to dry/evaporate before attempting to install the repair patches.

NOTE: If the front corner of the original heat shield has sustained some minor damage as a result of coming in contact with the driveshaft, the damaged section can be trimmed away. The repair patch being installed will provide heat shielding protection for the section that was trimmed away.

(3). Remove the protective liners from the back of the repair patch sections to expose the adhesive. Apply the repair patch sections in only the 2 areas indicated in Figure 3. Firmly push the heat shield against all the sheet metal and the factory installed heat shield surfaces that the repair patch sections come in contact with. This will make sure there is proper adhesion to all surfaces. Some overlap of the repair patch onto the driver side heat shield is expected and acceptable.

Figure 3



(4). Repair is complete.

6. Repair the heat shield on the underside of the body using 3 repair patches (Figure 1 Callout 2).

(1). Create 3 smaller individual repair patch sections by cutting a heat shield as shown in Figure 2. One long piece is to be cut 150mm x 520mm, and 2 smaller pieces are to be cut 150mm x 260mm.

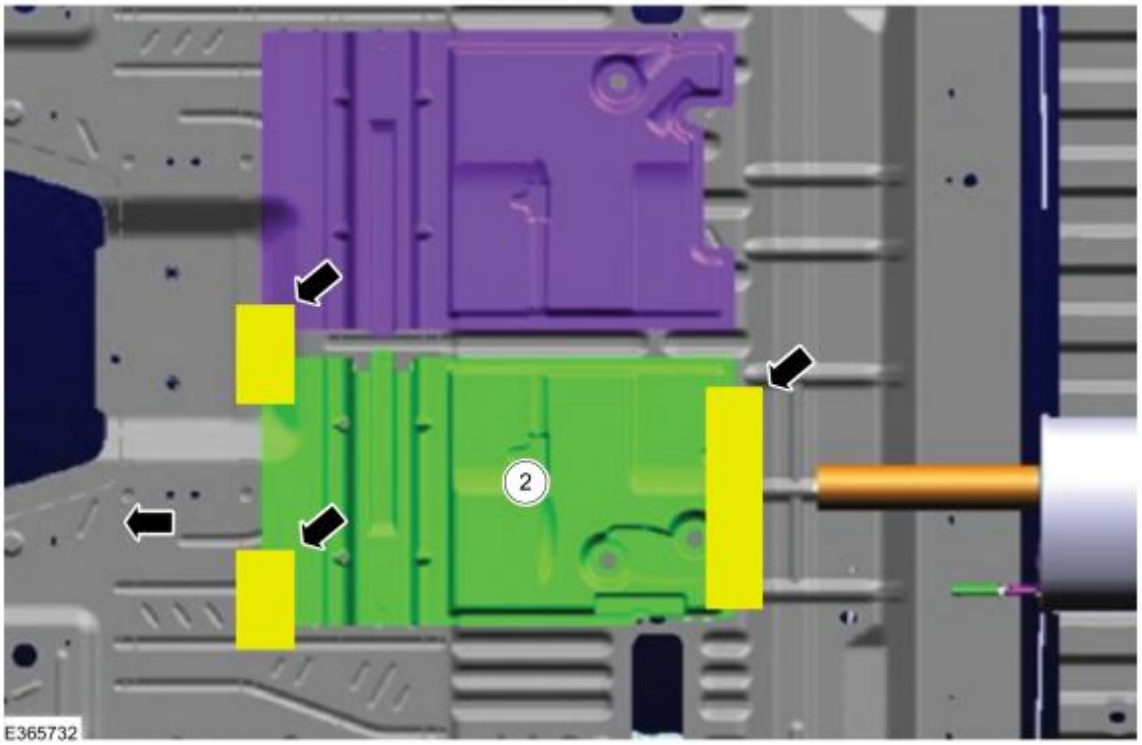
(2). Use isopropyl alcohol and a lint-free rag or equivalent to clean the sheet metal bonding surface and the surface of the factory installed heat shield of any dirt and debris to promote adhesion.

NOTE: Make sure that the surfaces being cleaned are free of moisture, dirt and that the isopropyl alcohol used in the cleaning process has had time to dry/evaporate before attempting to install the repair patches.

NOTE: If the front corner of the original heat shield has sustained some minor damage as a result of coming in contact with the driveshaft, the damaged section can be trimmed away. The repair patch being installed will provide heat shielding protection for the section that was trimmed away.

(3). Remove the protective liners from the back of the repair patch sections to expose the adhesive. Apply the repair patch sections in the 3 areas indicated in Figure 4. Firmly push the heat shield against all the sheet metal and the factory installed heat shield surfaces that the repair patch sections come in contact with. This will make sure there is proper adhesion to all surfaces. Some overlap of the repair patch onto the driver side heat shield is expected and acceptable.

Figure 4



NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford or Lincoln dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.